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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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08/811,234 03/03/97 SUGIMOTO

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005514 MM42/0913  
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EXAMINER

HARTARY, J

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 09/13/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

08/811,234

Applicant(s)

Sugimoto

Examiner

Joseph W. Hartary

Group Art Unit

2853



☒ Responsive to communication(s) filed on August 17, 1999 (Request)

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1, 4-14, 17-22, 25-30, and 33-62 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1, 4-14, 17-22, 25-30, and 33-62 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. The request filed on August 17, 1999 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/811,234 is acceptable and a CPA has been established. An action on the CPA follows.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 4-14, 17-22, 25-30 and 33-36 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims call for the plurality of inks to contain different component ratios of a surface active component, wherein an ink having a relatively high dye density has a lower component ratio of said surface active component than an ink having a relatively low dye density. The written description of this feature in the specification is

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considered inadequate. The claims now call for a control means for performing gradational recording by controlling discharge of each of the plurality of inks based on inputted multiple values. The written description (regarding Figures 4 and 5) does set forth a control means however there is no specificity as to how such a block diagram type control means provides for the specific ink relationships claimed. Regarding Claim 36, the specification does not provide evidence that the plurality of adhering inks have the same claimed properties, that is, that the solidified inks adhering to the recording medium have the same properties as the liquid inks in the recording head.

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 36 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim calls for a recorded article comprising a recording medium and a plurality of inks adhering thereto, the inks having different dye densities, different penetrabilities, and different component ratios of a surface active component. Such a recorded article is considered printed matter. MPEP 706.03(a).

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto 4,860,026 in view of Suzuki 4,551,736 and Sugimoto 5,477,248. Matsumoto discloses a recorded article comprising a recording medium 51 and a plurality of inks adhering thereto. Each of the inks would have a dye density, color, a penetrability, and a surface active component ratio. The inks have different dye densities and the same color. The claims differ from Matsumoto by reciting inks have different dye densities and the same colors have different penetrabilities. The claims further recite the ink having a relatively high dye density has a lower component ratio of surface active component than an ink having a relatively low dye density. The claimed recorded article is considered prima facie obvious over the Matsumoto recorded article 51 because a recording medium with a plurality of inks adhering thereto is shown. Penetrabilities and

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surface active components are considered ink expedients as evidenced by Suzuki and Sugimoto.

8. Claims 1, 4-14, 17-22, 25-30 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto 4,860,026 in view of Suzuki 4,551,736 and Sugimoto 5,477,248. Matsumoto discloses (Figure 9) an ink jet apparatus having plural ink discharge means 58-1 to 58-10 using a plurality of inks in combination with a control means (Figures 2 and 3). The claims differ from Matsumoto by reciting the use of inks with different dye densities having different penetrabilities and surface active components. Sugimoto and Suzuki disclose ink jet inks with penetrabilities and surface active agents are known. It would have been obvious to modify the Matsumoto inks with different components, a feature evidenced to be known by Suzuki and Sugimoto, for the reasons given by Suzuki and Sugimoto.

9. Claims 37-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto 4,860,026 in view of Suzuki 4,551,736, Sugimoto 5,477,248 and Sekiya JP 1-242256. Matsumoto discloses (Figure 9) an ink jet apparatus and method having plural ink discharge means 58-1 to 58-10 using a plurality of inks in combination with a control means (Figures 2 and 3).

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The claims differ from Matsumoto by reciting the use of inks with different dye densities having different penetrabilities and surface active components. Sugimoto and Suzuki disclose ink jet inks with penetrabilities and surface active agents are known. It would have been obvious to modify the Matsumoto inks with different components, a feature evidenced to be known by Suzuki and Sugimoto, for the reasons given by Suzuki and Sugimoto. Claims further recite the plural inks are divided and held in the same container. Sekiya teaches plural inks held in a divided container are known. It would have been further obvious to further modify the Matsumoto ink jet apparatus with a divided container, a feature suggested by Sekiya, for the purpose of containing the inks in a known alternative manner. The features recited in the dependent claims are suggested by the cited references.

10. Applicant's arguments filed July 13, 1999 have been fully considered but they are not persuasive. The claims have been amended to recite a control means for performing gradational recording by controlling the discharge of each of the plurality of inks. Such a control means is disclosed by Matsumoto. It is argued that the disclosure of page 20 line 6 to page 23 line 17 sufficiently describes different component ratios of a surface

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active component. It is the Examiner's opinion that this description does not address different component ratios of a surface active component, nor such ratios in combination with different densities and penetrabilities as claimed. It is also argued that claimed inks with different dye densities, penetrabilities, and surface active components can be recognized in the printed article. This argument is not persuasive for lack of supporting evidence. It is argued that Claim 36 is not directed to a mere arrangement of printed matter because of the claimed dyes. This argument is not persuasive. Claim 36 is to a recorded article. There is no evidence of record to substantiate the recorded article is anything else but a mere arrangements of printed matter (adhering inks). It is argued that the claims are patentable because none of the cited references discloses or suggests differentiating the penetrabilities of plural inks having different densities in the same color type. This argument is not persuasive. Matsumoto discloses differentiating plural inks having different densities in the same color type. The modification of Matusmoto to differentiate other known parameters of ink would have been within the skill of a worker in the ink jet art.



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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Hartary whose telephone number is (703) 308-3124.

 9/7  
Joseph Hartary  
Primary Examiner

JH

September 7, 1999